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Contributions to Surgery.

BY REYNELL COATES, M. D.

Note on the means of avoiding Excoriations of the Heel and Pirineum in Fractures of the Lower Extremities, treated by Permanent Extension.

Continued from p. 277.

In order to avoid the difficulty of measuring the fractured limb, which constitutes one of the objections to the gaiter, the sock, and the ordinary handkerchief, and also to secure an absolute freedom from retraction of the inferior fragment under the tonic or spasmodic action of the muscles, I contrived, in 1820, a peculiar extending band, which was employed for several years in the Pennsylvania Hospital, though it appears to be no longer a favourite there. It consisted of a simple slip of stout Hollands, cut very slightly bias, about the breadth of three fingers in the middle, and two at either end, long enough to extend from the tendo Achillis around the malleoli, to form a cross on the extreme upper part of the instep, and descend on each side of the foot to a short distance below the sole. To the extremities of this strap were appended two pieces of strong broad tape, designed to be attached to the splint or cross board. A strip of soft, smooth buckskin of similar shape, and nearly of the same length was employed as a lining for the band, being secured to it by marginal stitches none of which were permitted to pass through the entire thickness of the leather. This last precaution is all important; for the direct action of a single stitch, like a crease or inequality in a muslin roller will, almost inevitably, occasion excoriation over the heel or instep, when pressed upon the skin for several weeks by even the most moderate extending or retentive force.

This band is employed in the same manner with the handkerchief, when used according to the first or common method, (p. 274.) It is equally inextensible; because the tapes act only upon the unyielding Hollands, and the buckskin is not stretched in the least. It does not embarrass admeasurement in the slightest degree; but it shares with the handkerchief the inconvenience of not acting exactly in the line of the axis of the limb, and when crossed too low upon the instep, it drags the toes forcibly downwards in like manner. The value of these objections has been fully discussed in the preceding section of this note, (pp. 275, 277.)

The motive for cutting the material of this band bias, is to avoid the sharp action of the edges upon the soft parts over the tendo Achillis; it permits the band to adapt itself more perfectly to the curvature of the surface, on which the principal pressure is exerted. But it is necessary that the obliquity of the threads should be very slight; so that many of them should extend through the entire length of the band; for, if cut very obliquely, the unyielding character of the material is lost, it stretches easily, is thrown into folds, and becomes altogether unmanageable. *When rightly made, and*

carefully employed, I think it superior in certainty of action to any other means of extension; but it should not be disguised that slight errors of construction or management will render it more likely than the handkerchief to produce ulceration: the latter is, therefore, safer in the hands of those who are not very frequently called upon to treat fractures of the thigh.

Hitherto, our attention has been exclusively confined to the causes of excoriation of the heel; but it is now time to speak of those affecting the perineum. This part of the body is scarcely less susceptible of injury from pressure or local excitement than the regions of the heel and instep; and, therefore, the presence of a stitch in contact with the skin, a rugosity in a bandage, or the long continued contact of adhesive plaster or oily dressings are nearly as active causes of irritation and ulceration in the former, as in the latter situation. To this we may add the fact, that inflammations of the perineum are peculiarly prone to extensive diffusion,—and even to the termination in gangrene, under violent stimulations or pressure,—in consequence of the looseness and compressibility of the sub-cutaneous cellular membrane.

But the perineum furnishes the only available point upon which the counter-extending force can be made to act in fractures of the lower extremities.* Hence, it is of the utmost importance that we should avoid all those sources of excoriation, in effecting counter-extension, which have been already pointed out when speaking of simple extension. There are but two essentially distinct means of applying the former power: 1st. The counter-extending perineal band—some form of which is common to all the plans and modifications of long splints founded upon the similar principles of Boyer and Dessault, with the exception of the apparatus of Dr. Hartshorne: and, 2d. The perineal cushion on the superior extremity of the internal splint adopted by the last named surgeon. This latter contrivance will come under our notice in a future note; but, as the remarks upon the general causes of excoriation and ulceration, which form the legitimate subject of the present paper, are equally applicable to both the above methods, it is convenient to confine our attention at present to the former only.

The counter extending bands in ordinary use are less various in structure than those designed for extension. Simple strips of muslin of considerable width folded or rolled upon themselves, long narrow sacks of the same material stuffed with bran or chaff, and a combination of handkerchiefs have been employed. The first and last are now considered as mere extemporaneous resources where a proper band cannot be immediately obtained; as in the country, at a distance from the office of the surgeon; or at sea in an ill-provided vessel. Both are liable to serious objection from their liability to catch the skin between the folds or creases of the material. This difficulty may be

*The short splints invented by Dr. Hutchinson, of this city, about half a century ago, which were designed to effect counter-extension below the knee by means of bands encircling the limb, have been long ago condemned by all experienced surgeons in this department of the art, in consequence of the embarrassment to the circulation produced by the apparatus; and it is my intention to discuss, in future notes, the merits of the method of counter-extension on the ham, as practised by the advocates of the double inclined plane, with its modifications from White to Amesbury; that by the weight of the body, as in the single inclined plane of Professor Gibson; that adopted by Hagedorn, and that of lateral pressure upon the pelvis, which constitutes the only effective power of Dr. Gibson's modification of the apparatus of Hagedorn.

removed by the careful application of a long strip of smooth buckskin between the band and the perineum ; but frequent attention is required to prevent the displacement of the leather, and its readjustment generally compels us to intermit the extension ; which is a serious disadvantage on many accounts. Yet I have seen several very successful cases that had been treated entirely by these contrivances without the production of much excoriation.

In the practice of this city, the elongated sack now takes precedence of the other counter-extending bands, but it is too generally made of extensible materials, and stuffed so lightly as to be very compressible ; both which defects render it impossible to prevent entirely the retraction of the inferior fragment of the broken bone during the first days of treatment. When made of common muslin, the pressure of the threads upon the perineum is very apt to produce excoriation, and, as there is necessarily a longitudinal seam upon one side of the band, if this should be turned towards the skin, ulceration will generally occur, unless a piece of buckskin or soft linen should be interposed.*

The following is a description of the counter-extending bands introduced by me many years ago, and well known to the profession in this city. They have been repeatedly described in former papers, and are of a nature to reduce the danger of excoriation of the perineum to a minimum.

Take a piece of brown Holland linen (not muslin) three and half inches in width, (for an adult) and long enough to extend from about six or seven inches above Poupart's ligament in front, around the perineum, below the tuberosity of the ischium, and thence upwards over the nates to the level of the summit of the sacrum. Double this strip in the direction of its width, and secure the edges by a firm longitudinal seam leaving about $\frac{1}{4}$ of an inch of selvage. Then revert the linen tube thus formed, so as to throw the selvage inwards, and secure one extremity of the tube to $\frac{3}{4}$ of a yard of tape, without puckering or irregular folds. Choosing this for the anterior part of your band ; determine how much of its length will be probably required to rest upon the front of the abdomen above Poupart's ligament when the apparatus is applied ; fill this with bran, not tightly packed, and secure it in place by basting across the tube, until you can quilt it down firmly and flat with saddler's silk, making one of the flattened sides to correspond with the longitudinal seam. In the next place, mark the probable length of that part of the band which will extend round the perineum, from Poupart's ligament fully to the tuberosity of the ischium ; pick out the basting, and proceed gradually to stuff this portion of the tube with bran driven down by a round stick about an inch thick, as firmly as possible, without endangering the bursting of the band or rendering it too inflexible for convenient application. Having accomplished this, fill the balance of the tube with unpacked bran ; attach a similar piece of tape to the posterior extremity ; close it, and quilt it like the anterior extremity. This band presents a solid, but flexible cylinder, of one inch diameter to the perineum, with flattened extremities, bearing the weight of the pelvis or pressing upon the abdomen ; it is almost perfectly inextensible throughout, and, by the flatness of the ends, the skin is effectually secured from contact with the longitudinal seam. The material is also one of the least irritating that can be employed ; but, by the ac-

*The sheepskin of the shops should never be employed in dressings applied immediately to the skin, as the alum which it contains acts as an irritant, soon producing an erythema and then a troublesome eruption.

tion of the perspiration and other accidents, the linen may become foul and the bran matted and hard. To remedy this evil, the round part of the cylinder should be inclosed in another tube, formed by lightly stitching together the edges of a strip of buckskin, face to face, without selvage; which is very easily done: and even this seam should be carefully turned from the perineum and scrotum when the tube is drawn over the cylinder. When occasion requires it, this buckskin tube may be replaced by another, without moving either the body or the limb of the patient.

The cotton and tow so frequently employed in stuffing counter-extending bands, are extremely objectionable, because they invariably become matted, irregular and knotty.

I am fully convinced that under proper attention to the hints given above, excoriation or ulceration of the perineum will never occur from the direct action of a counter-extending band, when the forces employed do not greatly exceed the necessary and warrantable amount.

(To be continued.)

CLINICAL REPORTS.

Pennsylvania Hospital—Surgical Wards—Service of Dr. Norris.

By E. HARTSHORNE, M. D., Resident Surgeon.*

Case of Severe Compound Fracture of both bones of the Leg.—Wm. M., æt. 32, of sanguine nervous temperament, not very muscular, but in good health, and temperate, was admitted July 31st, with a bad compound and double fracture of both bones of the right leg, received the day previous at Havre de Grace.

This was a case of very serious injury, resulting from the caving in of a heavy bank of clay, ten feet in height, upon the man while he was digging at its base. He was violently thrown on his right side, with the left foot under the right leg. This latter sustained the whole force of the blow and the pressure of the superincumbent weight, while the former, together with the left leg, escaped unhurt. The entire body also, except the head and shoulders, was buried under the fallen mass, but did not undergo any severe contusion.

The fractures were reduced, the wound covered with bran,—its edges having been brought together with sutures and adhesive strips,—and the limb well fixed in a fracture box with cotton and bran, about an hour after the accident, by a practitioner of the neighbourhood. This dressing was so securely and comfortably applied, that when the patient was transported the next morning on the rail road, sixty miles to Philadelphia, he suffered comparatively little pain; nothing but the pressure on his heel giving him material uneasiness. He entered the hospital twenty-four hours after the reception of the injury.

The right tibia and fibula were then ascertained to be rather obliquely fractured about half way between their epiphyses, and again about three and

* This, and the case last reported, were treated under the direction of Dr. E. Peace. In narrating the last case, p. 234, the reporter omitted to state that the exposed bone was excised from the upper fragment.

a half inches from the ankle. Near the seat of the lower breach of continuity the fragments had been forced through the integuments on the inner side, so as to produce an irregularly semicircular lacerated wound, extending from within three inches of the internal malleolus obliquely upwards at least five inches. The rest of the leg and foot, and especially the external malleolus, had been much contused, and were then in a state of violent inflammation. Although the bones were presumed to be splintered, no small fragments could be found entirely loose, and the patient was not aware that any spicula had been removed at the first dressing.

The limb was extended in a fracture box on a pillow covered with oil cloth, as is usual in such cases; iced water was constantly applied to the inflamed surface; and the wound, which looked irritated and dirty, was relieved of its sutures and adhesive strips, cleansed, and covered with a warm poultice. An opiate was then administered, and directed to be repeated every night, or oftener if required. During the succeeding four days it was necessary to use the catheter, the man being unable, while on his back, to empty his bladder. The cold application was discontinued in a few days, as soon as the most active inflammation had subsided. Pledgets of lint and charpie were subsequently laid along the limb at each dressing, in order to absorb and retain the discharge. They were changed twice a day with the poultices until bran was employed.

Suppuration appeared to be fully established on the third day, and soon became very abundant; the pus flowing copiously from abscesses opening into the wound on every side, and extending in all directions around it. The discharge before long assumed an unhealthy character, becoming dark, thin, flakey and fetid; and it continued more or less so four or five weeks. This secretion was particularly free from the lower margin of the wound, where it was frequently accompanied with the flow of a serous fluid, like synovia, issuing from a cavity apparently in communication with the joint, extending in front of the ankle and instep and on their inner side, in which region even gentle pressure caused acute pain. A superficial slough of moderate extent appeared on the external malleolus; this was poulticed for two or three weeks, and then dressed as a simple ulcer, under which treatment the denuded surface readily cicatrised. Notwithstanding the free evacuation of the pus through numerous openings in the original wound—assisted by the application of warm poultices twice daily, and as much expression, at least every morning, as the patient in his reduced and irritable state could safely bear,—yet extensive burrowing took place among the muscles of the calf and the extensors. New abscesses successively occurred; the matter approached the surface at different points in front and outside near the upper seat of fracture, and was there allowed an exit by repeated counter-openings. This exhausting drain, the protracted suffering, and their accompanying constitutional irritation, prostrated the patient to an alarming degree, although he was faithfully supplied with the most nutritious diet and frequent draughts of porter. Such, indeed, continued to be his condition, generally and locally, that three, if not four weeks elapsed, before it entirely ceased to be a matter of deliberation from day to day whether or not secondary amputation would have to be performed. By that time the discharge had become perceptibly more healthy and less profuse; the patient suffered less pain at the dressing, and granulation advanced more rapidly and firmly in the wound, while most of the sinuses began to close. The poultice to the ulcer was re-

placed by less relaxing applications, and these again, by degrees, were made more stimulating and astringent.

Increased attention was then paid to the accurate adjustment of the fragments, and their retention at rest in position. The latter was effected by means of compresses carefully disposed on each side of the limb within the pillow, the sides of the fracture box being brought nearer together, so as to exert greater pressure. These indications were, of course, by no means disregarded even at the outset; but they were necessarily much more easily and fully answered at a later period in the treatment of the case.

The patient's sufferings were seriously aggravated by the unusual persistence and severity of burning pain in the heel from pressure, despite of varied and unceasing efforts to obviate the latter. None of the ordinary expedients, such as suspending the foot, supporting the ankle, or the extreme point on the sides of the heel, afforded any permanent relief; nor did any plan devised serve to prevent the occurrence of a small ulcer on the part.*

After the pillow and compresses had been employed two months, during which time the pillow was renewed, on account of its soiled condition, at least twice, they were replaced by the bran dressing, arranged in the following manner. The floor and open angles of the box having been covered with a layer of cotton, upon this was placed a piece of oiled linen large enough to fit in and line the whole interior of the instrument. A quantity of bran sufficient to make a comfortable, firm, and uniform bed for the limb, was next thrown in. On this bed the limb was then placed, without any additional support under the heel or elsewhere, and the apparatus closed up; more bran being packed in along the sides and filling up all the irregularities of surface, so as to press equably on every part. The benefits of this change manifested themselves so promptly and decidedly, as to excite regret that it had not been an earlier resort. The man expressed entire relief from pain, and especially in the heel, which now remained permanently at ease. The ulcer on its posterior face, which had yielded very little to a variety of applications,—pressure being always as much as possible avoided,—soon began to cicatrise, and gave no further trouble. The flow of pus lessened, the wound fast disappeared, consolidation rapidly proceeded, and the man's health daily improved.

Perfect rest was secured to the limb for three weeks; the bran, which became moistened by the still prevalent discharge, being replaced from time to time with a fresh article. At the end of this period union was found to be so far advanced, that the patient was able, unaided, to elevate his leg. The box was discontinued at the commencement of the twelfth week, a roller having been firmly applied in its stead. The wound entirely healed by the fourteenth week. Small fistulous openings continued to afford issue to matter on the outside of the leg near the upper seat of fracture. Paste board splints were put on at that time, and the patient was allowed to leave his bed. His health was then completely restored, and he had become quite fleshy and florid. He had not been walking about longer than two weeks before he was seized with violent erysipelas of the leg. This new affliction was preceded and accompanied by severe constitutional symptoms, of which

* Unfortunately, neither the air nor the water cushion, as commonly prepared, were within reach on this occasion; a good bladder, however, might have been resorted to for either purpose.

the cerebral, as evinced by intense cephalalgia, delirium, and stupor in succession, were strongly marked.

The general treatment for this new complication consisted in antiphlogistic measures at the onset, subsequently mild stimulations, with wine whey, beef essence, and cold infusion of cinchona; calomel in alterative doses, urged to ptyalism, and revulsion by a blister to the back of the neck. Cold slippery elm mucilage was applied to the affected part. Velpeau's solution of the sulphate of iron was tried and abandoned as inefficient in this case. Tincture of iodine and nitrate of silver were used in succession, but without avail, to circumscribe the eruption. This latter by degrees enveloped the whole limb, involving the lymphatic ducts and glands. It subsided with the constitutional symptoms in about two weeks, but was succeeded, however, by a deep seated abscess in the thigh, which discharged pus largely for about a week, and then closed. Meanwhile, during the progress of the second convalescence, the fistulous sinuses in the leg became obliterated without the exfoliation of any bone. Discharged Feb. 23d, cured,—some rigidity of the ankle joint still persisting; the injured leg, however, being very nearly if not quite as straight as the sound one, and not deformed by any tumours of callus.

Remarks.—The foregoing history affords an interesting proof of the entire adequacy of the simplest means to complete the cure of one of the worst forms of accidental injury which the practitioner is ever called upon to treat. The successful termination of a case so doubtful in its issue, and so far involving the safety of life and limb, amply repays the surgeon for any amount of pains bestowed upon the treatment, while it tends much to increase his confidence in the recuperative powers of nature when well seconded by the various appliances of therapeutic science and art.

The age, health, and good habits of this patient suggested a favourable prognosis, and induced the attempt to save a mangled extremity that must have been at once removed, had it been crushed at sea or on the battle-field; and which under the happiest auspices presented a condition sufficiently discouraging to make the boldest and most experienced surgeons pause ere they resolved to risk a life for the salvation of a member. The man seemed to be peculiarly alive to pain, which he was ill qualified to endure; and the intense suffering, almost inseparable from so grave an injury, soon appeared to deprive him of the little fortitude he at first possessed. Nevertheless, after having passed the dangers of gangrene, always to be dreaded for some days after such an accident, he escaped those of constitutional irritation; of absolute prostration from the exhausting suppuration, with its frequently attendant hectic fever, colliquative sweats and diarrhoea; of erysipelas; of purulent absorption; and lastly, of pneumonia. He was spared from all but the least fatal of these enumerated complications, erysipelas; nor did this manifest itself until the man had been some time convalescent. It is worthy of remark, by the way, that although the erysipelas was unusually violent in character, and was followed by a large phlegmonous abscess in the thigh, yet no softening from absorption of the callus, which not unfrequently results from such a cause, occurred in the seat of either fracture. The two fistulous sinuses still open near the upper fracture, gave exit to an increased flow of pus during the persistence of the erythema, but closed entirely soon after the subsidence of the latter, and cicatrised without the loss of a particle of bone. The employment of bran appears to have answered a decidedly good purpose in the management of this case. It fully proved its superiority when compared with the apparatus first adopted. No comparison was instituted

between it and the treatment by suspension of the whole limb, which is sometimes resorted to when the heel is troublesome, and especially when the wound is not very accessible from above. Such a trial was rendered unnecessary by the entire success of the more convenient plan.

THE MEDICAL EXAMINER.

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PHILADELPHIA, MAY 14, 1842.  
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Professor M'Clintock's Introductory Lecture.—This lecture was delivered at the opening of the session at the Castleton Medical College, Vermont, on the 8th of March, by Professor JAMES M'CLINTOCK, formerly of Philadelphia. It is an appropriate and well digested introductory to a course of medicine, written in a plain, energetic style, free from flourish, practical, and to the point. The professor discusses the relative advantages of metropolitan and village instruction to the student of medicine, and, though stating the case in the main very fairly, strikes the balance in favour of the latter. He pays a handsome compliment to "Philadelphia, the metropolis of Medical Science in this country, the only city in which medical schools have ever obtained the highest rank, or kept up a healthy existence for any length of time," and does ample justice to the opportunities for instruction that are here afforded. On the side of the village schools, Castleton in particular, he offers cheapness, freedom from the allurements of dissipation, and a course (we have no doubt a good one) of *eight* lectures. "In facilities for clinical instruction, he does not pretend to compare with Philadelphia," and herein, indeed, lies the great and hopeless inferiority of very small towns, as sources of practical instruction. Clinical medicine, and, especially, pathological anatomy, can hardly be taught except in large hospitals, and every student of medicine should endeavour to place these means of instruction within his reach, at least during a portion of his pupilage. The ground-work of a good medical education may no doubt be laid at schools like Castleton—we know at least that Prof. M'Clintock is an excellent teacher of anatomy; but he must excuse us for insisting that Philadelphia and some other large towns offer more advantages for *finishing off* pupils.

Dr. WILLIAM PEPPER was, on Monday the 9th of May, elected one of the Physicians to the Pennsylvania Hospital, to fill the vacancy caused by the resignation of Dr. B. H. Coates. This is an excellent appointment, and gives general satisfaction.

The physicians to the hospital now are, Drs. Wood, Stewardson, and Pepper; the surgeons, Drs. Randolph, (still absent in Europe,) Norris and Edward Peace.

ANALECTA.

Syrup of Wild Cherry Bark.—This is an elegant preparation, much used in the practice of Philadelphia, which is in some respects superior to the cold infusion made by maceration, as it contains the virtues of the article in a more concentrated form, and is capable of preservation for a long time. Messrs. Procter and Turnpenny, in the April number of the Journal of Pharmacy, give the following formula for preparing it:—

Take of Wild Cherry bark, in powder, ℥iv. Water, ℥xii. Sugar, in coarse powder, ℥xxiv.

Macerate the bark in the water for forty-eight hours; put the mixture into a displacement apparatus; return the fluid that passes several times, until it becomes transparent, and then add sufficient water to displace twelve fluid ounces of infusion. Place the sugar in a displacement funnel, and pass and repass the infusion through it, until it is all dissolved. Lastly, preserve in well stopped bottles.

Syrup of Valerian.—Messrs. Procter and Turnpenny offer the following formulæ:—

1st. Take of Valerian, in powder, ℥j. Water, ℥iij. Sugar, in coarse powder, ℥vj.

Macerate the Valerian in the water for forty-eight hours, and displace so as to obtain three fluid ounces of infusion; then, having placed the sugar in a displacement funnel, treat it with the infusion until it is all dissolved.

2d. Take of Valerian, in powder, ℥j. Water, ℥ijss. Alcohol, ℥j. Sugar, ℥vj.

Proceed precisely as in the preceding formula.

There are some occasions where the effect of Valerian is wanted, unassociated with that produced by the presence of alcohol. The first formula embraces this idea, and fully answers its object. The second, where alcohol is no objection, forms a more ready means of exhausting the Valerian.

[The following abstract of a case and comments by Mr. Liston, condensed from a paper read before the Royal Medical and Chirurgical Society, is interesting from the difficulty of diagnosis between aneurism and scrofulous tumor in this instance; but we regret that the details of the appearances on dissection are omitted by the Editor of the Gazette; for it is certainly difficult to understand, as Dr. Johnson pertinently remarked during the debate upon the paper, what could have prevented the appearance of pus, if the aneurism were really a result of intercommunication between the artery and a scrofulous abscess. Mr. Liston, in reply to this objection, stated "that pus might probably have been discerned by the microscope," but if present at all, it might be expected in large quantities; for it cannot be supposed that the

secretion of the abscess escaped by being mingled with the circulating fluid; nor could it be absorbed from the churning contents of a false aneurism.]

On a Variety of False Aneurism. By R. LISTON, Esq. F. R. S. Surgeon to University College Hospital.—The author's attention has lately been particularly directed to the subject of the communication between large blood-vessels and the cysts of abscesses, in consequence of having lately met with a remarkable case, in which the carotid artery opened into a large abscess in the neck.

G. A., æt. 9, suffered from severe illness about six years ago, by which he was left in a very reduced state. Two months back, he had a violent cough, accompanied with fever, and at this time *a small swelling* was observed in the neck, immediately below the right ear. This swelling increased slowly until within three or four days of his reception into the North London Hospital, on the 20th of October, when its progress had become rapid and irregular. At the date mentioned, there was observed a tumor extending from the angle of the jaw on the right side, downwards to within an inch of the clavicle, backwards to the posterior edge of the sterno-mastoid muscle which it raised, and forwards to about midway between the angle of the jaw and chin. The tumor farther projected inwards into the mouth between the arches of the palate, and materially impeded both deglutition and respiration. Indistinct fluctuation could be distinctly felt in the tumor, and there was slight pulsation in it, immediately over the course of the carotid artery; but on grasping the tumor, and examining it from the mouth, no pulsation could be felt. A small puncture was made into the tumor under the impression that it contained matter, but a gush of arterial blood followed the bistoury, and about four ounces were lost in a few seconds. The puncture was readily closed by hare-lip pins and twisted sutures, and the bleeding checked. I resolved on tying the carotid artery next day.

No hæmorrhage occurred in the course of the ensuing night, but the tumor was tense, and had been covered with a cold lotion. On proceeding to the operation, an incision, about an inch and a half in length, was made transversely over the sternal end of the clavicle, and another upwards and at right angles to the first, over and in line of the trachea; by which an angular flap was formed and turned upwards and outwards. The sternal attachment of the sterno-mastoideus being exposed was cut through; the sterno-hyoideus and sterno-thyroideus were next exposed after some dissection, and divided; at length the carotid artery was exposed a little above its origin from the innominata, and tied. The whole difficulty of the operation arose from the necessary smallness of the external incision. The tumor projected so low down into the neck, that it was impossible to procure space by extending the incision upwards, and the artery which lay at a great distance from the surface had to be sought for at the bottom of a small hole. The flap was laid down, and retained by some isinglass plaster. The boy complained very little after the operation, the swelling became smaller and firmer, and the movements of the jaw, which before were much restricted, were now more free and less painful. The pupil of the right eye, too, which had been contracted and only partially sensible to light, was now restored to its proper functions. The patient slept soundly through the night following the operation.

The pins and twisted sutures were removed on the 25th, and strips of

isinglass plaster applied in stead. On the 28th, some grumous blood escaped from the opening in the tumor. The patient was cheerful and happy. Things went on prosperously ; the tumor sinking in size, till the afternoon of November 3d, when a sudden gust of arterial blood took place from the wound in the fore part of the neck, the ligature being still firm. The hæmorrhage was arrested for the moment by plugging the wound with lint, but a considerable quantity of blood was lost. Hæmorrhage returned six times after this, and the patient finally sank into a state of collapse, 48 hours after the first occurrence of the bleeding.

On examination, the ligature was found to have been close to the origin of the carotid from the innominata. It was not completely separated ; a small portion of the external side of the artery still remaining entire. There had been no attempt at the formation of a clot, or if any had formed it must have been expressed with the blood.

The appearance of the tumor, both externally and internally, are most minutely described by the author, as are also the relation of the vessels to the cyst, and the condition of the opening of communication between the carotid artery and the latter. It would be impossible to do justice to these details in the space of a short abstract ; suffice it to say, that the author feels himself warranted in deducing from the examination of the parts the conclusion, that the disease was originally a chronic abscess of a scrofulous character, and that the opening into the artery was consequent upon ulceration from without.

The preparation of the parts, together with two drawings made from them in a recent state, were exhibited to the meeting.

The author relates, in confirmation of his views, the details of three other cases, derived from the practice of himself and others, in which large arteries in the neighbourhood of abscesses were opened by ulceration. Our space will not allow us to refer to these in detail.—*London Med. Gaz.* March 18th, 1842.

[We give the following article entire, although somewhat carelessly reported, as it is well calculated to impress upon surgeons of slender experience the propriety of attending with care to the minute details of surgical treatment, even under the most unfavourable circumstances. Had the position of the teeth been neglected by Mr. Griffin in this case, or had this gentleman removed the fragments of bone which were entirely detached from the jaws, and, in the lower jaw, almost separated from the soft parts also, his patient would have recovered with very serious deformity. Even in uncomplicated compound fractures it is too fashionable to tamper with loose fragments, most of which will reunite, if the periosteum remains freely attached to the surrounding soft parts, though no considerable osseous arteries may enter them ; and the usefulness of many a limb has been sacrificed by pseudarthrosis produced by removing detached pieces of bone under the influence of the ridiculous hyper-refinement of the physiological theorists of certain schools, who endeavour to attribute distinct functions to every little arterial branch of special destination, regardless of the vicarious power by which almost any organ may assist in fulfilling the office of another when severe

necessity demands the exertion. We fear that most surgeons would have sacrificed or neglected the central fragment of the lower jaw in this case, either from error of doctrine, or from the idea that the patient would necessarily die. Extensive fractures of the face are usually the result of tremendous forces, and very generally terminate fatally.]

Case of Complicated Fractures of both Thighs, and of the Upper and Lower Jaws, with Diastasis of the former. By RICHARD GRIFFIN, M. R. C. S., of Norwich.—Captain T., ætat 28, was driving a phaeton down a steep hill, when the horse took fright, and, coming in contact with a miller's waggon, dashed the carriage to pieces, and he received the following injuries:—An oblique fracture of the left thigh, near the knee-joint, and a transverse one of the right thigh, about its centre. For these I placed him on a double-inclined bedstead, and treated him in the usual way with perfect success. There were two wounds near the chin, each about two inches long, which required sutures to keep them in their proper position; and union took place by granulations in the course of a fortnight, leaving, at the end of three months, only faint lines indicating their former situation. The foreign body, causing one of these wounds, penetrated into the mouth, and cut through the lower jaw, immediately beneath the incisor and canine teeth, completely separating a horizontal portion of it containing these teeth, the only connecting medium left being a part of the gum in the inside. A medical gentleman present, considering its re-union improbable, proposed that the slight attachment should be cut through and the part removed; but this I declined, believing no harm would ensue in attempting to save it, though incalculable good would result, should it be successful. I therefore brought the part nearly into its natural position, and retained it there by wires fastened round the teeth contained in it, and to the adjoining fixed teeth. I found it impossible to get them to the same level as the others, the unnatural elevation being about one-eighth of an inch; but, in the course of three weeks, had the pleasure of observing them become gradually drawn down to their natural situation, by contraction of the granulations. The entire gum on the outside sloughed away, and caused the mouth to be very offensive, requiring chloride of lime gargles. At this time I doubted whether I should be enabled to save it; but after three days, granulations began to spring up from the surface of the bone, and covered it. These I had some trouble to prevent adhering to the wound in the lip, which was avoided by keeping lint constantly inserted between them. At the end of three months no ossific union had taken place, the bond being apparently ligamentous, thus permitting a slight motion. In every other respect the teeth were nearly as useful as before, and showed no disfigurement, or traces of so severe an accident. The superior maxilla of the right side was loose, having been separated at the sutures; so that by taking hold of the teeth inserted into it between the finger and thumb, the entire maxilla could be moved; this, in three or four weeks, became firmly fixed, not having required any treatment. The posterior part of this maxilla, containing the three last teeth, was also fractured, the teeth, with the bone attached, dropping a quarter of an inch below those adjoining. I fixed them with wire to the firm teeth; but they, like those in the inferior maxilla, did not unite by bone, although they became tolerably firm, and allowed only a slight degree of motion. This fracture gave me considerable trouble, not only in fixing the teeth, which were so close together that the wire could only be passed between their necks, and required much perse-

verance to twist it effectually, but from two abscesses which formed, and continued to discharge for two months, one internally and the other externally, through the cheek. From the latter several pieces of bone came away; and they ultimately healed, followed by the skin itself becoming attached to the bone, leaving a permanent depression, or dimple, in the cheek. Some of the front teeth of the upper jaw were also loosened, and an abscess formed connected with them, which discharged for some weeks, and several pieces of bone were detached. The zygomatic process of the right os malæ was fractured, and nature there perfected the cure, leaving a slight inequality only to show the seat of the injury. Soon after the patient was placed in bed he three times vomited blood of a dark colour, to the extent of nearly two pints, mixed, in all probability, with fluids of which he had partaken during the day. This was followed by moaning and a frightful state of collapse, the wrist being almost pulseless, and he appeared to be rapidly sinking. I immediately gave him 60 drops of laudanum in a small quantity of brandy and water, which I repeated three times in the course of two hours, when he began to rally, and he has since told me that each dose appeared to give him "fresh life." This state of collapse was brought on by the severity of the accident, conjoined to exposure in an open cart for some miles, on a very cold night. The blood vomited arose probably from the wounds in the mouth, and was swallowed, and not from injury of an internal part; had the latter been the cause, there would have been some marks of violence, or at least pain, denoting the injured part. This case is interesting, as it teaches us that wounds will frequently unite which are considered almost hopeless. I saw it still more strongly exemplified, some years since, at the Norfolk and Norwich Hospital, in a child whose leg was nearly cut off by a waggon passing over it; indeed, not more than a third of the muscle and integument remained that were not severed, the bones being both fractured. The late Mr. Martineau, whose case it was, immediately decided upon trying to save it, contrary to the opinion of all present, remarking, that as the patient was young and in good health, nature might effect a cure. And it was worth the attempt. In this case he was correct, as the child perfectly recovered.—*Ibid.*

Treatment of Mesenteric Glandular Affections. By Dr. CHARLES CLAY, Mem. Roy. Col. Physicians, London.—Under the name of marasmus, and as an affection of childhood, diseased mesenteric glands are very common, almost daily coming under the notice of medical practitioners, *particularly in manufacturing districts*, where laxity of fibre and much constitutional debility prevail, and where the habit, diet, &c., contribute considerably to its encouragement. But as a disease of puberty or adult growth comparatively little is known; yet it is certain that a disease strictly analogous to the marasmus of childhood is very prevalent, much more so, indeed, than is generally admitted, and annually carries off many whose deaths are often attributed to very different causes, even in other than manufacturing districts. Three-fourths of the common cases of atrophy are attributable to glandular obstruction only. From the many cases that I have observed during twenty years' practice, and in the treatment of which I have been engaged, a few practical observations with respect to it may not be unacceptable, particularly as there are few cases that call forth more patience from the medical attendant, and certainly none that are productive of greater disappointment, rendering it in the highest degree necessary to make a correct diagnosis, which, having

been made, a long and steady perseverance in remedial measures is to be pursued. I say a long and steady perseverance, because the nature of the case particularly requires it, not only on the part of the medical attendant, but also of the patient. In all cases of long-continued disease there is an aptness to run from one practitioner to another, vainly seeking that immediate relief which cannot possibly be given. If a correct diagnosis be once formed, and the slightest benefit obtained, every confidence should be placed in the party, and perseverance should be the motto of the invalid.

The treatment of mesenteric affections is so often confounded with that of atrophy from other causes, that great errors have arisen, which it is the more necessary to point out. No gland can be enlarged or indurated by disease without obstructing the operations of nature, for which those glands were especially formed; it is evident therefore when such indurations are ascertained to have taken place, our attempts at relief should be directed to the chief cause of mischief. Where glandular obstructions exist, it is evident that the quantity of chyle must be limited in proportion to the extent of diseased structure, and in the same proportion the system suffers from emaciation, not receiving the supply of nutriment sufficient to maintain the system in its former healthy state; consequently, this disease is found in every stage from the slightest obstruction to the entire obliteration of the glandular action; no chyle being poured into the blood, the system is emaciated in the extreme; the limbs or parts most distant from the centre of circulation become œdematous, and death immediately follows.

If, then, glandular obstruction be the diagnosis, what is to be done? This leads me to make a remark or two on some of the general axioms of treatment pursued in such cases, with a view to point out their errors, and substitute a plan that the writer has often pursued with considerable advantage.

Dr. Thomas observes, "That in all cases of atrophy the patient should make use of food that is nutritive and easy of digestion, and it should be taken *frequently*, but in small quantities at a time." I fully agree with him as to the kind of food, but maintain that to feed an atrophic patient *frequently* is a very mischievous doctrine, calculated to increase rather than lessen the evil: that the whole of the alimentary canal is much deranged in atrophic cases is certain, and the greatest caution is required in the selection of such food as will not require too great an effort for the digestive function; but for that organ to be continually stimulated by constantly taking food is decidedly injurious, the stomach requiring rest from its usual operations as much as any other organ in the body. The repose of the digestive function is necessary to the well-being of an invalid, and in none more so than in atrophic cases, when it is evident, however much chyme may be formed, no more chyle can pass into the system (in consequence of the indurated glands) if the patient be eating every hour in the day, or if only allowed to indulge three times in twenty-four hours; there can be then no advantage in debilitating digestion by frequent meals, whilst the disadvantages must be apparent to every one on the slightest reflection, viz., it increases general debility, and prevents the due operation of medicine calculated to resolve the existing indurations, and consequent obstruction in the mesenteric glands. Impaired digestive function is the consequence, *and not the cause* of the prevailing disease in this case. The real disease should be primarily attacked with the necessary caution of not impairing the powers of digestion further; it will then be evident that all those symptoms necessarily arising from such causes

must give way as the cause which provoked them vanishes. The too frequent exhibition of, and too much dependence on, powerful tonics, appears to me contrary to the diagnosis of mesenteric glandular affections, for it must be useless to waste time in the endeavor to improve the function of the stomach by tonic medicines, which, though considerably impaired, *is capable of digesting more food* than can be converted into chyle. The symptoms of indigestion we so often find as attendants of glandular obstruction, are often increased to a very considerable degree by the ill-advised and constant taking-food system.

Very many cases of this description are treated in respect to the miseries of indigestion, whilst the glandular affection is either totally lost sight of or treated merely as a secondary matter of minor importance, whereas the very reverse ought to be pursued. The constant stimulus kept up by tonics in an emaciated system (extremely sensitive and easily excited) counteracts every effort at reducing glandular induration; and this is rendered still more injurious by wines and other stimulating drinks which have been recommended. Such a mode of treatment might be adopted in the common forms of scrofula with less objection than in mesenteric affections, but I must confess even in those I never perceived stimulants attended by any good effect. In atrophic cases, however, they are highly pernicious, although they are esteemed by some as scrofulous affections. When œdema takes place, diuretics have been advised; but as this feature is one pointing out the inevitably fatal termination of the case, such means can only hasten the event, being only another drain on the already debilitated system, without adding anything to the supply. Should any means adopted prove successful in restoring the glands to a healthy action by resolving the existing induration and restoring them to their original size, then there can be no mistake in the exhibition of tonics freely adopting every means for restoring the physical powers of the system.

The treatment which I have found most effectual, and which I do not advance on mere theory, but from twenty years' close observation, is the use of a medicine that is generally allowed to be almost a specific in diseases of the glandular system, and that in doses so small as not to excite the disturbance of the digestive organs, combining such means with milder tonics just sufficient to keep the system from sinking any lower, without any anxiety for increasing the physical powers until the indurated glands may have been restored; under such circumstances I commence by giving the following:—

R Tincture of iodine, gtts. xxx;
Fowler's solution of arsenic, gtts. xxv;
Infusion of colombo or gentian, $\bar{3}$ vi.

M. Let one-sixth be taken three times a-day.

As it sometimes happens that the solution of arsenic produces pains in the head, I occasionally omit it in the mixture for the space of two or three days, after which it is resumed. By persevering some time steadily with this mixture I have found the worst cases much ameliorated, and life considerably lengthened, whilst many have been entirely restored to health; but as glandular resolution is of itself an extremely slow process, so it requires both perseverance and confidence on the part of the invalid, and great patience from the medical attendant. It is also necessary in the progress of cure to affect the system very slightly with mercury once or twice (and in some cases of

extensive disease of long standing) even three times with great advantage, by which means the absorbent vessels are stimulated into freer action, and the effects of the iodine seem to be improved by it. When it is requisite to give mercury, I prefer affecting the system as rapidly as possible by very small doses of calomel very often repeated, as

R Calomel, grs. ij;

Crumb of bread, enough to make twenty-four pills. Take one every hour until the mouth is affected.

The advantage in this is, that the desired effect is frequently produced within twenty-four hours, when the iodine mixture can be resumed (which it is necessary to omit whilst the effect is being produced.) This plan, if strictly attended to, is one that I can recommend with confidence as a safe and effectual one, applicable to every case of glandular induration, and unsuccessful only in cases too long neglected, where the action of the glands is almost entirely obliterated. The diet should be strictly such as to afford the greatest quantum of nourishment with the least possible exertion of the stomach, to be well masticated, mixed with as little fluid as possible, (with the exception of milk) and particularly to avoid those of a highly stimulating character, such as wines, spirits, and fermented liquors: to let a space of at least six hours elapse between taking food, and even then the stomach should not be overloaded. These rules are imperative to the well-being of the patient. Exercise should be of the gentlest description; why horse exercise should be so highly spoken of by many I cannot conceive; in many instances I have seen it the very reverse of gentle; only fancy a weak, emaciated female tugging at the reins, and urging forward a stupid, rough-paced animal with an exertion highly injurious; unless the adviser would go farther and say the kind of horse he recommends, he might as well send his patient to the treadmill: unless, then, the horse is a very suitable one, I am convinced the patient would progress better without such exercise. Where it can be procured, and weather permitting, an airing in an open carriage or a gentle walk is to be preferred; if, on the contrary, the weather is unfit, a swing rocking horse, or exercising chair, are very good substitutes; the mind to be kept cheerful, free from extraordinary excitements, occupied rather on pleasant trifles than on subjects requiring reflection. The atrophic cases of manufacturing districts, however, have but little comfort at command; still I have seen many restored under almost every disadvantage, and am anxious the plan should have a more general application, that its merit may be fully and fairly tested.—*London Lancet*. March 26th, 1842.

[The treatment proposed by Dr. Clay promises very fairly in many cases of mesenteric disease, before tuberculous secretion has taken place, when the glands are merely swollen and indurated. But we should not venture to rely upon the practice without occasionally substituting a mild purgative of rhubarb and some of the simple bitters.]

Deaths from Thomsonism.—Dr. JOHN BUTTERFIELD, of Lowell, Mass., reports, in the Boston Journal for May 11th, a case of erysipelas, 'in the onset not severe,' in which the patient was treated by a Thomsonian quack. He took capsicum, was put through a regular course, and finally steamed three times in twenty-four hours! In a state of coma with convulsions, he was handed over to the "regulars," and died after lingering a short time.